

### **AMENDMENTS TO THE CLAIMS:**

The listing of claims will replace all prior versions, and listings of claims in the application:

### **LISTING OF THE CLAIMS**

Please cancel claim 43 without prejudice and amend claims 24 and 42 as follows.

Please add new claims 44-46 as follows.

1-2. (Cancelled)

3. (Previously Presented) A stent as claimed in claim 24 wherein the supporting portion of the stent is fabricated to incorporate a non-planar curved form.

4. (Cancelled)

5. (Previously Presented) A stent as claimed in claim 24 which is of generally hollow tubular shape with three-dimensional curvature.

6. (Previously Presented) A stent as claimed in claim 24 in the form of an open lattice generally tubular framework with discrete openings at each end thereof.

7-11. (Cancelled)

12. (Previously Presented) A stent as claimed in claim 24 in combination with a device which assists in monitoring the condition of the vessel.

13. (Original) A stent as claimed in claim 12 wherein the device is a sensor adapted to transmit a signal responsive to one or more internal flow conditions.

14. (Original) A stent as claimed in claim 13 in which the sensor is ring-shaped and is electrically connected to a remote module incorporating power supply, signal detection and recording means.

15. (Previously Presented) A stent as claimed in claim 13 wherein the sensor is adapted to transmit signals which can be monitored by at least one of ultrasound, magnetic resonance imaging and electron spin resonance imaging techniques.

16. (Previously Presented) A stent as claimed in claim 13 wherein the sensor portion forms an integral part of the stent and the means of excitation and signal detection are entirely extracorporeal.

17-23. (Cancelled)

24. (Currently Amended) A stent for insertion into a vessel, which stent includes a supporting portion around which part of an intact vessel other than a graft can be placed, so that the stent internally supports an interior wall of that vessel part, wherein the supporting portion comprises a hollow tube, the walls of which have openings therein so that when the stent is inserted in a vessel the interior wall of the vessel part is not fully shielded exposed via said openings to fluid flow along the vessel, and wherein the supporting portion of the stent, ~~is of a~~ when in the vessel, has a non-planar, at least partially helical shape ~~and/or orientation~~ which imposes a non-planar, at least partially helical, curve on the vessel whereby fluid flow within the stent supported part of the vessel follows the non-planar curve to induce swirl flow.

25. (Previously Presented) A stent according to claim 24 which is adapted to flex three dimensionally but which has sufficient torsional stiffness to induce and maintain in use the non-planar curvature.

26. (Previously Presented) A stent as claimed in claim 24 fabricated from a shape memory alloy.

27. (Previously Presented) A stent as claimed in claim 24 fabricated from a linked mesh or series of linked wire members which is coiled or partly coiled or helical or partly helical.

28. (Previously Presented) A stent as claimed in claim 5 formed from a series of rings in which the material of the stent has the form of a wave in the azimuthal direction with link members extending in the imaginary surface of the tubular stent and joining one ring to another.

29. (Previously Presented) A stent according to claim 28 in which the joints between a link member and each ring linked by the member are separated by more than the least distance between the adjacent rings.

30. (Previously Presented) A stent according to claim 28 wherein the link member has a wavy form part.

31. (Previously Presented) A stent according to claim 28 wherein the link member has a coil form part.

32-41. (Cancelled)

42. (Currently Amended) A stent ~~that is inserted~~ for insertion into an associated intact vessel which stent includes a supporting portion around which part of the associated intact vessel other than a graft is placed, so that the stent internally supports ~~that~~ an interior wall of the associated vessel part and, the supporting portion of the stent being of a shape and/or orientation which imposes a non-planar, at least partially helical, curve on the associated vessel whereby fluid flow within the stent supported part of the associated vessel follows a non-planar curve to induce swirl flow.

43. (Withdrawn) A method of inserting a stent having a supporting portion into an associated intact vessel, comprising the step of placing the stent within the associated intact vessel such that part of the associated intact vessel is disposed around the supporting portion, and so that the stent internally supports the associated vessel part, wherein the supporting portion of the stent is of a shape and/or orientation which imposes a non-planar

curve on the associated vessel whereby fluid flow within the stent supported part of the associated vessel follows a non-planar curve to induce swirl flow.

44. (New) A stent for insertion into a vessel, comprising:  
a pre-shaped flexible supporting portion which supports an interior wall of the vessel and imposes a shape thereon, comprising:

a hollow tube including a wall,

a plurality of openings located in the wall of the tube so that the interior wall of the vessel is exposed, via said openings, to fluid flow along the vessel, and

wherein the hollow tube is at least partially helical in shape so that a swirling fluid flow is induced within the vessel.

45. (New) The stent of claim 44 further comprising a sensor operatively connected to said hollow tube, said sensor being adapted to transmit a signal responsive to one or more internal flow conditions.

46. (New) The stent of claim 44 wherein a rigidity of said hollow tube is reduced adjacent one end thereof.